United States Environmental Protection Agency - Region III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Proposed Revision to Total Maximum Daily Loads for Nutrient and Low Dissolved Oxygen in the Christina River Basin Watershed Pennsylvania, Delaware, and Maryland

Established on April 8, 2005:

John A. Armstead for

Jon Capacasa, Director
Water Protection Division
EPA, Region III

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Jon Capacasa, Director
Water Protection Division
EPA, Region III

Proposed Revisions to Nutrient and Low Dissolved Oxygen TMDL Under High-Flow Conditions for Christina River Basin, Pennsylvania, Delaware, and Maryland

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Region 3
1650 Arch Street
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Proposed Revision to Christina River Basin Nutrient and DO TMDLs

On April 8, 2005, the Region III (Philadelphia, PA) office of the Environmental Protection Agency (EPA) established Total Maximum Daily Loads (TMDLs) for nutrients and dissolved oxygen (DO) under high-flow conditions for the portions of the Christina River Basin listed on the Clean Water Act Section 303(d) lists for the Commonwealth of Pennsylvania and the State of Delaware. As explained below, EPA is now proposing revisions to the nutrient and dissolved oxygen TMDLs and is seeking public comments on these revisions for a period of 45 days.

The Christina River Basin TMDLs were approved in April 2005 in order to partially fulfill the requirements of the settlement of a 1996 lawsuit in Pennsylvania *(American Littoral Society and Public Interest Group of Pennsylvania v. EPA)*. The consent decree requires that EPA either approve or establish a certain number of TMDLs for Pennsylvania streams by April 9, 2005. In addition, the settlement of a 1996 lawsuit in Delaware *(American Littoral Society and Sierra Club v. EPA)* required that the Christina River, Red Clay Creek, White Clay Creek, and the Brandywine Creek bacteria TMDLs be approved or established by December 31, 2005.

Following the establishment of the TMDLs EPA decided, for several reasons, to conduct a re-evaluation of the Christina River Basin TMDLs. An additional comment period is being provided to allow the public to review the changes being proposed by EPA as well as to further review the water quality model used.

Following the establishment of the Christina River Basin high-flow TMDLs for nutrients and DO, the City of Wilmington and Delaware DNREC completed a storm-monitoring program. The goal of the storm-monitoring program was to collect nutrient and bacteria data from four storm events to establish characteristic concentrations for the CSO discharges in the City of Wilmington. Two storm events were completed prior to the April 2005 TMDL. After April 2005, additional monitoring data were available. This proposed TMDL revision incorporates the additional storm monitoring data to establish updated event mean concentrations (EMCs) for the Wilmington CSO discharges.

For the April 2005 TMDL modeling effort, groundwater flows and nutrient loads for some of the HSPF subbasins were incorrectly included twice in the EFDC receiving water quality model. This problem with the HSPF-EFDC linkage was corrected and the proper groundwater flows and loads are used for this revised TMDL. The revisions to the TMDL are described in Appendix E.

No changes have been made to the endpoints used in the TMDL analysis. As was the case with the April 2005 TMDL, the non-MS4 NPDES point sources in this revised TMDL do not require any additional load reductions above and beyond those established in the low-flow nutrient TMDL. Load reductions were required for nonpoint source and CSO discharges in order to achieve the TMDL nutrient and dissolved oxygen endpoints. The proposed revisions are sufficient to meet water quality standards.

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